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Serial Number: 10/087,377 Filing Date: March 1, 2002

Title: CORONARY SINUS LEAD WITH THERMAL SENSOR AND METHOD THEREFOR

## IN THE CLAIMS

Please amend the claims as follows:

- 1-10. (Canceled)
- 11. (Canceled)
- 12. (Canceled)
- 13. (Currently Amended) The method as recited in claim 11, A method comprising:

  providing an implantable lead and an implantable electrical stimulation source;

  coupling at least a first and a second thermal sensor with the implantable lead;

  placing the implantable lead within a coronary sinus of a heart, further comprising

  including positioning [[a]] the first thermal sensor within the coronary sinus, and positioning

  [[a]] the second thermal sensor within a right atrium of the heart;

measuring a myocardium temperature from the first thermal sensor within the coronary sinus of the heart; and

measuring a temperature change within the coronary sinus.

- 14. (Currently Amended) The method as recited in claim 13, further comprising measuring a first temperature within the coronary sinus, and a second temperature in within the right atrium.
- 15. (Original) The method as recited in claim 14, further comprising measuring a difference between the first temperature and the second temperature, and pacing the heart in light of the difference.
- 16. (Canceled)

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(Currently Amended) The method as recited in claim 44 13, further comprising pacing 17. the heart with the lead, and adjusting delivery of pacing signals in light of the temperature change in within the coronary sinus.

- (Currently Amended) The method as recited in claim 11 13, further comprising using the 18. temperature change in within the coronary sinus as an indicator of a change in the functional status of the heart.
- 19. (Previously Presented) A method comprising: providing an implantable lead and an implantable electrical stimulation source; coupling at least one electrode with the implantable lead;

coupling at least one thermal sensor with the implantable lead, including coupling a first thermal sensor and a second thermal sensor with the lead;

placing the implantable lead within a coronary sinus of a heart and positioning the first thermal sensor within the coronary sinus, and positioning the second thermal sensor within a right atrium of a heart;

coupling the implantable lead with the implantable electrical stimulation source; and measuring a myocardium temperature.

- 20. (Original) The method as recited in claim 19, further comprising monitoring temperature changes within the coronary sinus and temperature changes within the right atrium.
- (Original) The method as recited in claim 19, further comprising providing pacing pulses 21. to the electrode when a decrease in temperature in the first thermal sensor is detected.
- 22. (Original) The method as recited in claim 19, further comprising monitoring a rate of temperature change in the coronary sinus, and monitoring a rate of temperature change in the right atrium.

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- 23. (Original) The method as recited in claim 22, further comprising determining whether the rate of temperature change in the coronary sinus is greater than the rate of temperature change in the right atrium.
- 24. (Original) The method as recited in claim 23, further comprising providing pacing pulses to the at least one electrode if the rate of temperature change in the coronary sinus is greater than the rate of temperature change in the right atrium, and if the temperature in the coronary sinus is less than the temperature of the right atrium.
- 25. (Original) The method as recited in claim 19, further comprising monitoring temperature changes in the coronary sinus and using the temperature changes in the coronary sinus as an indicator of a change in the functional status of the heart.
- 26. (Canceled).
- 27. (Currently Amended) The method as recited in claim 26, A method comprising:

  providing an over the wire implantable lead and an implantable electrical stimulation source;

coupling at least a first and a second thermal sensor with the implantable lead; coupling at least one electrode with a portion of the implantable lead; placing the implantable lead within a coronary sinus of a heart;

further comprising positioning [[a]] the first thermal sensor within the coronary sinus, and positioning [[a]] the second thermal sensor within a right atrium of the heart;

measuring a myocardium temperature from the first thermal sensor within the coronary sinus of the heart; and

pacing the heart with the lead, and adjusting delivery of pacing signals using the myocardium temperature measured within the coronary sinus.

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(Previously Presented) The method as recited in claim 27, further comprising monitoring 28. a rate of temperature change in the coronary sinus, and monitoring a rate of temperature change in the right atrium.

- (Currently Amended) The method as recited in claim 26 27, further comprising 29. measuring a difference between a first temperature within the coronary sinus and a second temperature in a the right atrium, and pacing the heart in light of the difference.
- 30. (Canceled)
- 31. (Currently Amended) The method as recited in claim 26 27, further comprising monitoring a temperature changes change in the coronary sinus and using the temperature changes change in the coronary sinus as an indicator of a change in the functional status of the heart.
- (Currently Amended) The method as recited in claim 26, A method comprising: 32. providing an over the wire implantable lead and an implantable electrical stimulation source;

coupling at least one thermal sensor with the implantable lead; coupling at least one electrode with a portion of the implantable lead; placing the implantable lead within a coronary sinus of a heart; positioning one or more of the at least one thermal sensor within the coronary sinus; measuring a myocardium temperature from the one or more thermal sensor within the coronary sinus of the heart; and

pacing the heart with the lead, further comprising including providing pacing pulses to the at least one electrode when a decrease in temperature in the at least one or more thermal sensor within the coronary sinus is detected.

33. (Canceled)

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## 34. (Canceled)

- 35. (New) The method as recited in claim 32, further comprising monitoring a temperature change within the coronary sinus, and using the temperature change within the coronary sinus as an indicator of a change in the functional status of the heart.
- 36. (New) The method as recited in claim 32, further comprising positioning one or more of the at least one thermal sensor within a right atrium of the heart and measuring a temperature within the right atrium.
- 37. (New) The method as recited in claim 36, further comprising measuring a difference between the temperature within the coronary sinus and the temperature within the right atrium, and pacing the heart in light of the difference.